ML8 Chapter 2 Problems of the Week Answers

BLM 2–4 Chapter 2 Problems of the Week
1. Answers will vary depending on the 10-speed bike. Most 10-speeds have 52 teeth and 29 teeth on the two larger pedal sprockets. The five smaller wheel sprockets may have 28, 24, 20, or 17 teeth. The greatest ratio would be 52 : 17. The smallest ratio would be 29 : 28. Larger ratios are used when you are looking for speed on a downhill ride and smaller ratios are used when riding uphill or on rough terrain.
2. The ratio of 1 : 2 compares apples to peaches. Kelsey picked 10 apples and 20 peaches. The fraction $\frac{1}{2}$ compares the number of one colour of apple to the total number of apples.
b) Answers may vary. Example: No, Kelsey picked 10 apples out of 30 pieces of fruit. This does not represent 50% as the 1 : 2 ratio might suggest.
3. a) 16 : 20 or 4 : 5 or 80%
b) Answers may vary. Example: No, rates cannot be expressed as a percent because a rate compares two quantities measured in different units.
4. Answers may vary. Example: Although both trees grew 0.5 m, if you compare the growth rate of each tree, the spruce tree grew faster than the pine tree. Spruce tree: $3 \div 2.5 = 1.2$ or 120%; Pine tree: $4 \div 3.5 = 1.14$ or 114%. Therefore the spruce tree grew faster.
5. Think of the trip in equal time periods.

Distance (km)	100	25	25	25	25
Time (h)	1	1	1	1	1

6. The age ratio is 30 to 6 or 5 to 1. This age ratio will never happen again. Explanations may vary. Example: No other combination of ages that are equivalent to a 5 to 1 ratio work out for a 25-year difference in age.
7. The plane's average speed over the first three hours was 800 km/h.